

MEASURING THE ACADEMIC ACHIEVEMENT AND ENGLISH LANGUAGE  
PROFICIENCY OF STUDENTS AT THE SECONDARY LEVEL

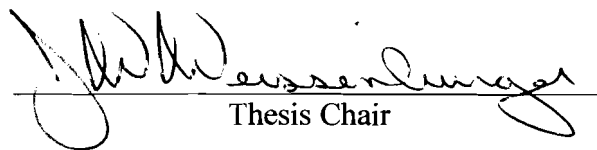
By

Jessica R. Wille

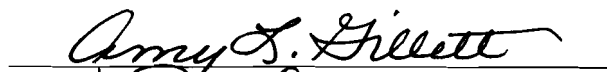
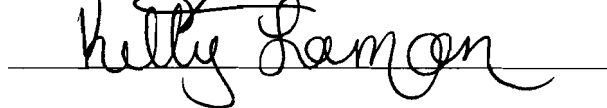
A Research Paper  
Submitted in Partial Fulfillment of the  
Requirements for the Degree of Education Specialist  
With a Major in

School Psychology

Approved: 6 Semester Credits

  
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### ABSTRACT

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Measuring the Academic Achievement and English Language Proficiency of Students at the			
(Title)			
Secondary Level			
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School Psychology	Jacalyn W. Weissenburger, Ph.D.	(May/2006)	52
(Graduate Major)	(Research Advisor)	(Month/Year)	(No. of pages)
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American Psychological Association (APA) Publication Manual: Fifth Edition			
(Name of Style Manual Used in this Study)			

With the increase in English language learner populations, the extent of ELL programming, and the need to increase retention, it is important to use appropriate assessment tools to determine the need for programming and to measure progress for ELL students. The purpose of this study was to determine the connection between English language proficiency as measured by the Language Assessment Scales (LAS) and academic success measured by grade point average and the Wisconsin Knowledge and Concepts Examination (WKCE). Further, this research sought to determine the utility of the LAS for measuring growth over time.

Participants ( $n = 29$ ) were enrolled in a north central Wisconsin school district. Data was collected for 8<sup>th</sup> and 10<sup>th</sup> grade students during the 2002-2003 school year. Separate correlational analyses were computed to determine relations between language proficiency and WKCE and

grade point average. Further, dependent *t*-test analyses were conducted to determine language proficiency growth. Findings reveal acceptable developmental validity on the LAS reading measures, while the writing measures failed to demonstrate acceptable alternate form reliability. Results of language proficiency correlations with measures of GPA and performance on the WKCE revealed mixed results. The overall evidence did not confirm the usefulness of the LAS to predict student achievement as measured by cumulative GPA or the WKCE's Reading and Language Arts standard scores.

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### Acknowledgments

I wish to thank Dr. Jacalyn W. Weissenburger, my research advisor, for her invaluable support, encouragement, and contributions throughout the project. Dr. Weissenburger helped design the study, assisted in the logistics of data collection, and aided in the revision of this paper. She also assisted in connecting me with the participating school district.

I also wish to thank Dr. Fred Weissenburger, Executive Director of Student Services and Dr. Anthony Beardsley, Director of Pupil Services for the Eau Claire Area School District, who permitted use of the school district's data for the purposes of the study. I am also thankful for Christine Ness, UW-Stout, for her help with the data input and data analyses. Additionally, I thank Fafani Bents, school psychology graduate student, and Pat Fuhrmann, Pupil Services Secretary, for their assistance in the data collection.

Finally, I thank my thesis committee for their support and guidance. Committee members were Dr. Amy Gillett and Kelly Lamon.

## Chapter I

### Introduction

The English Language Learner (ELL) population in the United States grew 46% in 10 years for students aged 5-17 (National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs, 2002a). In many states, the data reveal a staggering explosion of students who do not speak English as their first language. States such as Minnesota, Nebraska, and Nevada have seen over a 200% growth in their ELL populations since the 1990 Census. Other states (such as Wisconsin, Missouri, Colorado, and Florida) have experienced a one hundred percent increase in their ELL population since 1990. The current number of ELL students in the United States is reported at approximately 5 million, and these numbers are expected to rise in the upcoming years (National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs, 2002b). In fact, by 2030, the ELL population is expected to account for approximately 40% of the school-aged children in the United States (Roseberry-McKibbin & Brice, 2000).

Given the overwhelming influx of students who do not natively speak English, the federal and state governments are left to determine how best to serve these children and their families. An important educational issue is how to meet the needs of ELL students in the classroom. The mounting numbers of ELL students present a growing challenge for national, state, and local educational agencies. Examining the policies and procedures regarding the instruction of students who come from non-English speaking backgrounds has become imperative. Reforms in the education of ELL students are based on research, case law, and legislation. Such reforms



outline how these students are to be educated and assessed. Further, standards have been set as to how school districts are to be held accountable for results.

Research indicates that it takes 4 to 12 years of second language development for the most advantaged students to reach a level of academic proficiency in which they can compete with native speakers (Collier, 1995). Thomas and Collier (1998) assert the average native English speaker gains about 10 months of academic growth in one 10-month academic year. To have skills that are commensurate with those of native English speakers, ELL students must make nine years progress in six years. Not surprisingly, many ELL students often find this difficult due to a variety of environmental challenges. It has been widely reported that ELL students have lower achievement (Center for Language Minority Education and Research, 1996; Ramirez, Yuen, Ramey, & Pasta, 1991) and higher drop out rates (U.S. Department of Education, 1992) than native English speaking students.

Identifying the causal factors of lower academic achievement for ELL students is complicated by the diversity of a school's ELL population. ELL students may include those of Hispanic, European and Asian origin. These eclectic subgroups of the ELL population carry with them varying degrees of socioeconomic status, immigrant status, English language ability, and ethnicity, all of which have been shown to affect academic achievement (Adams, Astone, Nunez-Wormack, Smoldaka, 1994; U.S. Department of Education, 1992). Other considerations include the age at arrival in the US, the previous level and quality of schooling, the educational level of parents, student mobility, and the type of special program in which the student is enrolled (Porter, 2000). Therefore, a myriad of factors can influence both the English proficiency and academic achievement of English language learners.

The implications for limited English language proficiency and academic achievement are many. High school drop out rates are a primary concern. Lower academic achievement and socioeconomic status are consistently linked to dropping out of school (Adams, et al., 1994). Limited English language students with poor grades and poor test scores are most likely to drop out of school (Adams, et al., 1994). This problem is especially noted for Hispanic students who have lower high school achievement and lower college attendance than whites (Adams, et al., 1994; National Center for Education Statistics, 1992). Reports show both Hispanic ethnicity and language use are independent factors that contribute to dropping out of high school (Adams, et al., 1994).

Based on the growing English language learner population and the evidence that many students with limited English language proficiency exhibit difficulties with academic achievement, it is important to find technically adequate assessments that can identify language proficiency and monitor the developing language skills of students with limited English language skills. Since the language proficiency of many ELL students is frequently evaluated with the Language Assessment Scale (LAS), further inquiry into this assessment's ability to predict academic performance and monitor the developing language skills of ELL students is necessary.

Therefore, the primary purpose of this study is to examine the relations between English language proficiency, as measured by the LAS, and academic achievement, as measured by student grade point average (GPA) and scores on the Wisconsin Knowledge and Concepts Examination (WKCE). This study also will examine whether the LAS is capable of measuring English proficiency growth over the course of one year for students at the secondary level in a north central Wisconsin school district.

The following research objectives guided this study:

1. To determine the relation between language proficiency, as measured by the Language Assessment Scales (LAS), and academic success, as measured by grade point average (GPA).
2. To determine the relations between language proficiency, as measured by the Language Assessment Scales (LAS), and academic success, as measured by the standardized test scores of the Wisconsin Knowledge and Concepts Examination (WKCE).
3. To determine whether ELL students from a north central Wisconsin school district increased their language proficiency from year to year, as measured by the Language Assessment Scales.

## Chapter II

### Literature Review

In many schools and districts across the United States, the growth in enrollment of language minority students has been remarkable. These increasing numbers of language minority students offer a compelling reason to analyze the assessments, identification, and programming of students with limited English proficiency. This chapter will outline the process of second language acquisition, define the English language learner and describe the identification and programming of ELL students. Further, assessment issues and significant policy and reform efforts of bilingual education in the United States will be discussed. In addition, assessment tools used to measure English language ability will be described. Finally, research related to the academic achievement of ELL students will be reviewed.

#### *Second Language Acquisition*

The process of second language acquisition is complex and unique for each student. Two distinct sets of skills are known to define language proficiency. Cummins (1984) described the interplay between everyday language skills and more advanced communication skills. When beginning to learn a second language, students develop a level of conversational skills known as basic interpersonal communication skills (BICS). This surface level of language is embedded in context and relies on external interpersonal cues between individuals for daily communication. According to Cummins, competence in BICS is developed between two and five years of exposure to a second language. In contrast, cognitive/academic language proficiency (CALP) is considered more deeply developed and less reliant on context and situational cues. CALP is

considered essential for success on academic tasks. The development of CALP skills is thought to be achieved between five and seven years of exposure to a second language (Cummins, 1984).

The implications of BICS and CALP for second language acquisition are many. With sufficient skills in basic language (BICS), a student may appear to be successfully proficient in social contexts; however, the student may perform poorly in academic areas.

#### *Definition of English Language Learner*

Varied definitions exist to describe English language learners. Under Section 7501 of the Bilingual Education Act, reauthorized in 1994 under Improving America's Schools Act, an English language learner (formerly known as Limited-English-Proficient) is a student who:

“Was not born in the United States or whose native language is a language other than English and comes from an environment where a language other than English is dominant; or is a Native American or Alaska Native or who is a native resident of the outlying areas and comes from an environment where a language other than English has had a significant impact on such an individual's level of English language proficiency; or is migratory and whose native language is other than English and comes from an environment where a language other than English is dominant; and who has sufficient difficulty speaking, reading, writing, or understanding the English language and whose difficulties may deny such an individual the opportunity to learn successfully in classrooms where the language of instruction is English or to participate fully in our society.” (Part E, Section 8)

The Wisconsin Literacy Education and Reading Network Source (2003) defines language proficiency as “the ability to speak, read, write and understand that language well enough to be

able to thrive in a monolingual society” and “compete with native language speakers in the classroom” (§ 1).

The lack of consensus in defining English language learners and the complexity of language acquisition continue to fuel debates and disparities between the states (Del Vecchio & Guerrero, 1995). Among the differences, Del Vecchio and Guerrero (1995) concluded that definitions of language proficiency share several vital features. They asserted that most definitions include speaking, listening, reading, and writing in a specific context, such as in an educational setting.

#### *Identification Process for English Language Learners*

Federal law does not directly mandate the means of identification, placement, and classification of English language learners. Therefore, all states have developed their own criteria for properly identifying English language learners for educational purposes. Many states use the same basic procedures. They gather information from teachers and parents, check evaluation records from previous schools, and conduct assessments of the students’ academic levels and language skills (DeAvila, 1990). First, language minority students are often screened by a home language survey. The California Home Language Survey is typical and asks four questions:

1. What language did your son or daughter learn when he or she first began to talk?
2. What language does your son or daughter most frequently use at home?
3. What language do you use most frequently to speak to your son or daughter?
4. What language is most often spoken by the adults at home?

If the parent indicates an answer other than English to any of the four questions, the student’s English proficiency is assessed further (California State Department of Education, 1989).

*Assessment Tools for ELL Students*

Once a need for assessment is established, school districts use a variety of formal and informal measures to determine the need for language programming. The amount and type of assessments vary by district (Burnett, 1993). Most districts include a combination of classroom assessments, such as: rating scales, checklists, rubrics, portfolios, teacher observation, journals, sentence strips, oral interviews, and story telling (Wisconsin Literacy Education and Reading Network Source, 2003) in addition to more formal standardized assessments. Unfortunately, no method is ideal because there is no general agreement on an operational definition of a limited English proficient student (Department of Education, 1991).

Formal assessment measures include standardized language proficiency tests. A wide variety of language proficiency and achievement assessment tools have been developed to determine which children should be included in English language learner programs. Clements (1992) suggested the most accurate and effective assessments coordinate measurements of oral and written language proficiency, as well as comprehension in both English and the student's first language. Several of the widely used assessments include the IDEA Proficiency Test (IPT), Woodcock Munoz Language Battery, and the Language Assessment Scales (LAS).

According to Ballard, Tighe, and Dalton (1991), the IDEA Proficiency Test (IPT) is one widely used language proficiency measure designed to identify English language learners and determine entrance and exit criteria for language programs. The IPT measures language proficiency, reading, writing, listening and speaking skills for students in preschool through twelfth grade. Versions are available in English and Spanish. The theoretical foundation for the

IPT series is based on the four stages of language acquisition including babbling, echolalic, telegraphic, and syntactic (Ballard, et al., 1991).

The Woodcock Munoz Language Survey is another more recently developed language proficiency exam that uses Cummins' (1984) BICS and CALP models as the theoretical foundation. The Woodcock Munoz Language Survey was specifically designed to measure cognitive academic language proficiency (CALP), and it employs the classifications of negligible, very limited, limited, fluent, and advanced to describe the levels of English CALP. A Spanish version is also available to measure Spanish language proficiency. The Woodcock Munoz Language Survey is designed to determine eligibility, understand a student's language skills, assess progress, and evaluate programming. It can be administered to students over four years of age (Woodcock & Munoz-Sandoval, 1993).

The Language Assessment Scales (LAS) is one of the most common language tests used by states and districts (De George, 1988; Schwartz, 1994). The LAS is designed as a screening test to measure English language skills in reading and writing as those skills are considered necessary for functioning well in a mainstreamed academic environment (Duncan & DeAvila, 1988). The test is designed to assist with placement decisions and measures ability to succeed by comparing student performance to that of mainstream students achieving at the 40<sup>th</sup> percentile rank level or better (Carpenter, 1995).

While the LAS is a widely used test, it has received a fair amount of criticism. Some believe it measures only a low level of language knowledge, not the higher level of language knowledge that students need for success in school (Schwartz, 1994). Other criticisms of the LAS involve the amount of test items. Carpenter (1995) stated, "The number of items on the



LAS R-W is small. Only 10 or 15 items are used for multiple-choice items. For reading comprehension, there is one story and 10 multiple-choice items. For story writing, students write only one story. Students write five sentences in sentence writing” (Carpenter, 1995, p. 550). Further, Carpenter (1995) asserts the small number of subtest items may contribute to “relatively low (about half are less than .80) reliability coefficients for internal consistency” (p. 550). Guyette (1995) reported the internal consistency was adequate, yielding values ranging “from  $r = .6492$  to  $.9064$ , with the majority of values in the .7 and .8 range” (p. 552). The alternate form validity of the LAS also appears adequate, with “the majority of correlations are greater than  $r = .8$ ,” with the exception of those subscales (i.e., “Finishing Sentences” and “What’s Happening?”) involving less objective scoring (Guyette, 1995, p. 552). Interrater reliability was not reported. Overall, it appears “both low reliability and less than adequate validity” and the “small number of items and lack of sensitivity at the upper ranges” does not justify using the LAS alone to make programming decisions (Carpenter, 1995, p.550). According to Del Vecchio and Guerrero (1995), the Language Assessment Scales also do not adhere to any particular theory of literacy development.

#### *Problems with Assessment*

Although a selection exists, Mandarano (2003) stated there is a “general scarcity” of adequate tests designed to measure one’s English language proficiency (§ 11). In addition, the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (NCELA) reported that locating adequate diagnostic tools to measure language proficiency is “one of the greatest challenges facing schools that serve English language learners” (NCELA, 2002b, p. 1).

Educators and researchers hold various concerns regarding the assessment of language proficiency. Del Vecchio and Guerrero (1995) stated, “language proficiency tests have been developed based on a plethora of definitions and theories” (p. 1). They also explained test development may indicate a particular model of language proficiency, but it is difficult to determine how the model was “operationalized in the form of a test” (p. 1). Furthermore, problems with defining language proficiency cloud the waters as attempts are made to develop psychometrically sound assessment tools. As most definitions of language proficiency include speaking, reading, listening and writing (Del Vecchio & Guerrero, 1995), a comprehensive language proficiency test should employ measures that reproduce the types of context-based language used in mainstream classrooms.

Another complicating issue in the selection of assessments is the eligibility criteria used to identify ELL students. Eligibility criteria often are arbitrary cut-offs that vary greatly among states and school districts (DeAvila, 1990). Since school districts within a state use differing assessment tools, students moving between districts can be identified by different language classifications (i.e., Limited English speaker, Competent English speaker, Non English Speaker) (Ulibarri, Spencer, & Rivas, 1981).

### *Impacts of Policy and Reform Efforts*

With the growing numbers of students who come from homes that speak languages other than English, school districts must be prepared to educate them. The story of bilingual education in the United States “has been as much about political controversy as about actual practices” (Burnett, 1993, p. 1). Therefore, local politics and funding policies can have a direct impact on student placement (Burnett, 1993).

There exists a great deal of case law and legislation governing the identification, programming, and assessment of students who speak and write very little English. One of the first pieces of legislation that granted rights to English language learners was Title VI of the Civil Rights Act of 1964. Title VI prohibits discrimination on the basis of race, color, or national origin in federally funded programs. Title VI also requires programs to provide services based on sound educational theory, with adequate staff and resources, and periodic evaluation and revisions. Therefore, school districts cannot deny a student equal access to education because of limited proficiency in English.

In 1974, the Supreme Court ruled in *Lau v. Nichols* that "there is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum, for students who do not understand English are effectively foreclosed from any meaningful education." Therefore, schools must provide students "with an education that meets their language needs" (Schwartz, 1994, p.1). However, the *Lau v. Nichols* ruling did not mention how to provide such an education, thus leaving it up to the discretion of individual school districts. Because of this broadly painted decision with no universally accepted model, school districts throughout the United States employ an expansive array of language identification, assessment, and instructional strategies (Schwartz, 1994).

Another applicable court case is *Castaneda v. Pickard* (1981). This case brought about a three-pronged test for determining whether a school district is taking appropriate action to overcome language barriers. The three steps are as follows:

1. The school district pursues a program informed by an educational theory recognized as sound by experts in the field.

2. A school systems' programs and practices follow the educational theory adopted by the school, assuming that sufficient resources are provided (i.e., trained teachers and textbooks).

3. After a sufficient length of time, the school district engages in a proper evaluation of the special program to determine that language barriers are being overcome. (Rebell & Murdaugh, 1992, p. 365)

The third step makes school districts accountable in addressing the needs of limited English proficient (LEP) students. It mandates that there must be clear evidence that students have benefited from programming, have increased their English proficiency, and have made progress in their academic achievement.

The No Child Left Behind Act (NCLB), signed into law by President George W. Bush on January 8, 2002, represented a "sweeping change of the federal government's role in kindergarten-through-grade-12 education by asking America's schools to describe their success in terms of what each student accomplishes" (U.S. Department of Education, 2003a). As a result of this law, school systems are now required to track the progress of their students by annually measuring academic achievement and reporting their assessment results to national agencies.

The four basic education reform principles of the No Child Left Behind Act affect all students, including students of English language minority. These principles include stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work (U.S. Department of Education, 2003a). States are designated as responsible for implementing strong academic standards, while school districts are responsible for improving the academic performance of their

students. NCLB gives states more freedom to direct federal education money to programs that will help their students. In addition, NCLB frees federal education dollars to implement research-based, effective programs. Further, as part of NCLB, parents now can choose to transfer their child to a better performing school if their child is currently enrolled in a school needing improvement.

The No Child Left Behind Act also addresses how students of limited English proficiency are to be served in public education. NCLB states schools are to utilize quality language instruction, encourage home and community participation, and to hold state and local educational agencies accountable for English proficiency and academic progress. (U.S. Department of Education, 2003b).

Under NCLB, state education agencies are required to provide evidence that all students in grades 3-12, including English language learners, are making demonstrable improvements in English proficiency and adequate academic yearly progress for each school year. Thus, English language learners will participate in the state's academic assessments in English or in their native language, whichever will provide the most accurate assessment of their academic performance. In addition, NCLB mandates that the English language proficiency of students learning English be assessed for at least three years (Roeber, 2003), and school districts will be held accountable for these results. As promising as this new legislation is to the field of English language education, it does not specify guidelines for states and districts to define English proficiency, to develop standards, or to implement instruction.

Since public education is primarily a state responsibility, Wisconsin has developed its own Model Academic Standards. Wisconsin's benchmarks specify the content, performance, and

proficiency standards for all students in the state. In turn, Wisconsin's districts use their academic standards as guidelines for developing their own local curriculum. The standards then serve as a foundation for establishing meaningful goals and programmatic decisions for students with disabilities and those with limited English proficiency. These statewide standards also form the scope and content of Wisconsin's statewide testing program.

### *Programming for English Language Learners*

Since no consensus exists about the most effective way to meet the educational needs of ELL students, school districts employ various levels of programming. Many factors affect the types of education programs that school districts offer, including the number of students or the variety of languages they speak. The Office for Civil Rights suggests school districts use the following procedures to ensure effective programming for ELL students: identify students needing assistance; develop a program which, in the view of experts in the field, has a reasonable chance for success; ensure that necessary staff, curricular materials, and facilities are in place and used properly; develop appropriate evaluation standards, including program exit criteria for measuring the progress of students; and assess the success of the program and modify it where needed (US Department of Education, 2000).

English-language immersion, late-exit transitional, and early exit programs are used by various school districts. English-language immersion programs involve the teacher using English for all instruction, while using the home language informally for occasional clarification or directions. Students may use their home language to respond to the teacher or to talk to each other. Pupils are mainstreamed into English speaking classrooms as soon as they have shown adequate proficiency in English (Ginsburg, 1992).

Late-exit transitional programs are intended to help students become proficient in their home language before they develop proficiency in English. In late-exit transitional programs, the teacher is fluent in both languages. Upon entering elementary school, students receive several years of instruction in their home language until instruction gradually shifts to English at about the fourth grade. Students are then mainstreamed into the regular English speaking classroom in 5<sup>th</sup> or 6<sup>th</sup> grade (Ginsburg, 1992).

Early-exit programming is commonly used in the United States and is considered a transitional bilingual education program. As the intermediary between immersion and late-exit programs, early-exit programming uses home language instruction for several hours each day, while content is generally taught in English. Students are then mainstreamed into English-only classrooms once they are able to understand English in a general classroom (Ginsburg, 1992).

#### *Research Related to the Achievement of ELL Students*

There is likely a plethora of reasons outside of language ability that affect the academic success of English language learners. These include socioeconomic status, consistency of services in special language programs, preschool attendance, mobility, regularity of school attendance, and grade retention (Texas Education Agency, 1998). Many studies have examined the relation between language proficiency and academic success.

In the mid nineties, Hernandez-Gantes (1995) examined the achievement of 2,721 Hispanic-American eighth grade students from the National Education Longitudinal Study of 1988. Hernandez-Gantes found the achievement of these students was impacted by previous grades, motivation, quantity of instruction, and homework. The leading predictor variables were

socioeconomic status and English proficiency. In addition, gender had a small influence, as boys generally did better than girls on measures of achievement (Hernandez-Gantes, 1995).

In another large-scale study, the National Education Longitudinal Study examined the backgrounds, language skills, and academic abilities of approximately 4,500 Asian and Hispanic eighth graders. Of those students, teachers identified approximately 330 as Limited English Proficient (LEP). Among the Asian students, as English proficiency increased, the percentage of those underachieving in reading decreased. There was no significant difference between the Asian students' levels of English proficiency and math achievement (National Center for Education Statistics, 1992). Within the Hispanic subgroup, English language proficiency was "strongly related to reading and math achievement" (National Center for Education Statistics, 1992, p. 67). Thus, the percentage of those students who achieved basic reading and math levels increased as their English proficiency increased. Socioeconomic status also was positively correlated with academic achievement for both the Asian and Hispanic students in this study.

Students with limited English language skills have also been studied in post-secondary institutions. Stoyneff (1997) examined factors related to academic achievement for 77 freshman international students. Results indicated that language proficiency and selected learning or study strategies were found to correlate with academic achievement as measured by GPA, credits earned, and the number of withdrawals.

Adams, et al. (1994) examined the predictive value of English and Spanish proficiency, home language use, immigration status, gender, place of geographic residence, and mother's education on the GPA of ninth-grade Mexican-American and Puerto Rican high school students. Interestingly, both gender and immigrant status significantly predicted GPA. Females earned



significantly higher GPAs than the males in this study. Gender differences may be explained by the differences found in the school behavior of girls and boys, as behavior can affect the academic performance of all students. Despite the challenges of immigration, the Hispanic students who were born outside the United States had significantly higher levels of academic achievement than students who were born in the United States. The results of the Adams study may be explained by other research (Cummins, 1989) that suggested a positive relation between the effects of poor social and school environments and the length of time needed to adapt to a new culture. Most interestingly, among the Mexican-Americans, higher English proficiency was correlated with lower academic performance. This was not true for the Puerto Ricans in the study. Adams et al. (1994) attempted to attribute this inverse relationship to peer relationships in the Mexican-American community that may stigmatize students as being more “Americanized” as their level of English proficiency increased (p. 11). This stigmatization may act as a “counterforce” to the sensitivity of Mexican-Americans to their cultural identities (p. 11). Thus, some Mexican-American students may discourage their peers from achieving at higher levels.

Another study examined the correlation between English proficiency and achievement as measured by standardized achievement scores and GPA. Garcia-Vazquez, Vazquez, and Lopez (1997) examined 100 randomly selected Hispanic students in grades 6-12. Results showed a significant connection between proficiency in English, grade point averages, and standardized achievement test scores. Of note, a stronger relation was found between English proficiency and standardized test scores on the Iowa Tests of Basic Skills than with GPA. Garcia-Vazquez, et al. (1997) attributed this to the low reliability of GPAs as they can be influenced by many factors such as teacher bias, student behavior, and student effort. Garcia-Vazquez et al. (1997) also

noted the positive influence of reading and writing skills in Spanish on the achievement scores. This result is consistent with the breadth of research indicating that children who receive the strongest first language development are more likely to develop higher levels of second language abilities (Cummins, 1992; Ramirez, Yuen, Ramey, & Pasta, 1991).

The academic achievement of English language learners as they enter college also has been studied. Crisostomo and Dee (2001) examined the academic success of immigrant students at a large public university system in the United States. They found sociodemographic variables had no statistically significant correlation with academic success; however, they found that students who lived in the United States for 10 years or longer had lower GPAs than students who emigrated more recently. Crisostomo and Dee (2001) hypothesized this discrepancy may have been due to the interruption of their native language acquisition; which, in turn, may have inhibited their second language acquisition and academic achievement.

In another study, Bers (1994) examined over 600 limited English proficient students in a community college setting. Bers found that limited English proficient students did not significantly differ in academic achievement from the total student population. Academic achievement was defined as persistence in courses, credits earned, and GPA.

In summary, the growth in enrollment of language minority students in the United States is staggering. Federal, state and local education agencies use various means of assessing, identifying and providing programming for students with limited English proficiency. This chapter outlined the various policy and reform efforts of bilingual education in the United States. In addition, assessment tools used to measure English language ability were described, and research related to academic achievement of ELL students was reviewed. Language proficiency

testing is a multifaceted task that continues to guide language researchers and test developers as varying theories exist to define the nature of language proficiency and how to best assess it.

Empirical results indicate a myriad of factors appear to influence academic achievement among English language learners. These include gender, socioeconomic status, immigrant status, and number of years in the United States. In general, however, students who demonstrate higher levels of English proficiency are more likely to exhibit higher levels of academic achievement.

### Chapter III

#### Method

The purpose of this study was to determine the relations between language proficiency levels, as measured by the Language Assessment Scales (LAS), and academic success for a population of ELL students in north central Wisconsin. Further, it sought to determine whether the students' levels of English proficiency increased from year to year, as measured by the LAS. To investigate this topic, district administrators from one public school district in north central Wisconsin were contacted in the spring of the 2002-2003 school year. After explaining the purpose and nature of the study, the district agreed to participate.

#### *Participants*

The participating school district consisted of students who resided in or near an urban school district. For the 2002-2003 school year, the district had a total student enrollment of 10,835 students, 51.3 % of the students were male and 48.7% were female (Wisconsin Department of Public Instruction, n.d.). The ethnic breakdown of the district was 86.7 % White, 9.5% Asian, 1.5 % Black, 1.2% Hispanic, 1.1% American Indian (Wisconsin Department of Public Instruction, n.d.). Further, 3.8% of the district population was designated Limited English Proficient and of the Hmong ethnic group (Wisconsin Department of Public Instruction, n.d.). All eighth and tenth grade students classified as English as a Second Language (ESL) were selected to participate in this study during the 2002-2003 school year.

Data was collected on a total of 29 students (see Table 1). Of the 29 students, 27 (93 %) produced complete data sets. Two students had incomplete records due to believed absences on the initial LAS testing date (2002).

### *Procedure*

#### *Data Collection*

After obtaining permission from the school district, existing data was extracted from students' cumulative school files by a school psychology graduate student. Data on academic achievement, including grade point averages and scores on standardized tests, were obtained. Standardized achievement data was measured by the Wisconsin Knowledge and Concepts Examination (WKCE), administered the previous school year (2001-2002) in English.

English language proficiency data was also collected from students' cumulative files. The Language Assessment Scales (LAS) was administered to the students by district school psychologists during the 2001-2002 and 2002-2003 school years. All participants were administered Form 3A during the 2001-2002 school year and Form 3B during the 2002-2003 school year. Students who did not understand English were administered the LAS with the assistance of an interpreter. Demographic data (i.e., gender, age, ethnicity, grade level, middle school attended, high school attended, special education classification) was retrieved from the students' cumulative files. A district secretary then supplied student eligibility for free and reduced lunch data before assigning research identification numbers to each student. All names and identifiers were removed before data was submitted to the researcher.

#### *Instrumentation*

##### *Language Assessment Scales (LAS)*

The Language Assessment Scale Reading/Writing (LAS R/W) is a battery of competency tests for reading and writing skills designed to aide entry and exit criteria decisions for students in English language learner programs. The LAS R/W examiner's manual described the LAS as a

measure of English language skills in reading and writing rather than a pure achievement test, published by CTB Macmillan McGraw-Hill (Duncan & DeAvila, 1988). Further, the LAS R/W may be combined with the LAS Oral to provide a more comprehensive evaluation of English proficiency.

The LAS R/W includes seven subscales measuring separate aspects of reading and writing. They include multiple-choice items measuring various aspects of reading, including mechanics and usage, vocabulary, and fluency and comprehension. The LAS writing measure includes two to three measures of sentence completion, sentence writing, and essay writing. Scoring for the multiple-choice items is clear; however, scoring for writing subscales involves examiner judgment using a 4-point rating scale.

Scoring is completed using instructions and charts from the manual. After raw scores are obtained for each subscale, a standardized score can be derived using the appropriate tables for the reading section, writing section, and the combined total. Standardized scores are then converted to competency levels and categories. Competency level 1 is equivalent to low levels of reading and writing skills. Students who achieve competency level 1 scores are considered to be in the non-reader or non-writer categories. Competency level 2 is equivalent to mid-level reading and writing skills, and competency level 2 students are considered to be in the limited reader or limited writer categories. Competent readers and writers receive competency level 3 scores, meaning the student's skills are equivalent to those of mainstream students achieving at or above the 40<sup>th</sup> percentile on a nationally-normed test (Duncan & DeAvila, 1988).

The LAS is divided into three levels corresponding to grade placement. Form 1 is appropriate for grades 2 and 3, Form 2 is appropriate for grades 4 to 6, and Form 3 is appropriate

for grades 7 to 9+ (Duncan & DeAvila, 1988). Each form includes two parallel versions, Form A and Form B. Form 3 includes ten multiple-choice items each in the areas of synonyms, fluency, and antonyms. Fifteen multiple-choice items measure mechanics and usage, and ten multiple-choice items measure reading for information. For writing, five graphic prompts are provided to elicit one sentence per prompt, and one graphic prompt is provided to elicit a written essay. For the purposes of this study, raw scores, standard scores, and competency levels were collected for both the reading and writing sections of the LAS.

*Wisconsin Knowledge and Concepts Examination (WKCE)*

The Wisconsin Knowledge and Concepts Examination (WKCE) is a statewide standardized achievement assessment given annually to students in grades four, eight, and ten (Wisconsin Department of Public Instruction, n.d.b). The WKCE measures achievement in reading, language arts, mathematics, science, and social studies.

WKCE scale scores are reported for each of the achievement areas. A scale score is a numeric score on a scale of equal intervals. It allows comparison between different groups of students and can show academic growth from year to year. Scale scores across subject areas are not equal, as each subject area is scaled differently (Wisconsin Department of Public Instruction, n.d.b).

*Grade Point Average (GPA)*

Grade point averages (GPAs) were computed on a 4.0 scale by the students' schools and collected from their cumulative files. For the eighth grade students, GPA included the cumulative coursework from the sixth through eighth grade school years. For the tenth grade

students, GPA included the cumulative coursework from their ninth grade and tenth grade school years.

### *Data Analyses*

The first research question addressed the relations between LAS scores and GPA scores. To answer the first research question, Pearson bi-variate correlation coefficients were computed between the LAS scores and the students' GPAs.

The second research question addressed the relations between the LAS scores and the WKCE scores. To answer the second research question, Pearson bi-variate correlation coefficients were calculated between the reading and writing scale scores on the LAS and the Reading, Language Arts, Science, Math and Social Studies standard scores on the WKCE.

The third research question addressed the ability of the LAS to measure growth in reading and writing proficiency from one year to the next year. To address this question, dependent group *t*-test analyses were computed between the 2002 and 2003 reading and writing raw scores and standard scores on the LAS.

Due to the small sample size and preliminary investigative nature of the study, a probability value of .05 was adopted to determine statistical significance. Thus, for both the correlational and *t*-test analyses, probability values less than .05 were determined to yield statistically significant results.



## Chapter IV

### Results

This chapter presents the findings and evaluation data analyses related to the research questions. At the beginning of the chapter, preliminary analyses address the alternate form reliability of the LAS. Results of the analyses addressing each research question follow.

#### Preliminary Analyses

To examine the alternate form reliability of the LAS, Pearson two-tailed correlations were employed. Results of standard score correlations are displayed in Table 2. Results of raw score correlations are displayed in Table 3. Results indicate significant alternate form correlations for the total sample in reading. These significant alternate form correlations allow for further data analyses to examine the developmental validity of the LAS in reading measures. The total sample, however, did not show significant alternate form reliability coefficients for the writing measure. Due to this failure to meet an acceptable criterion level between Form A and Form B, the writing measures appear inappropriate for use when examining a student's growth in writing proficiency.

#### *Research Question One: Intercorrelations of LAS and GPA*

The first research question addressed the relations between language proficiency, as measured by the Language Assessment Scales (LAS) standard scores and academic success, as measured by grade point average. To address this question, correlational analyses were employed. Results are reported in Table 4. As indicated, correlations revealed several significant coefficients, with varying levels of significance. The lowest correlations were found between

eighth grade GPA and the reading standard scores on both forms. The strongest correlations were found between the eighth grade GPA and the writing standard scores on both forms. The total group showed a significant positive correlation between GPA and performance on the writing form A. The total group also showed a significant negative correlation between GPA and performance on the reading Form B. No significant correlations were found between eighth grade reading performance on the LAS and GPA, or with tenth grade writing performance on the LAS and GPA.

*Research Question Two: Intercorrelations of LAS and WKCE*

The second research question addressed the relations between language proficiency, as measured by the Language Assessment Scales (LAS) raw scores and standard scores, and academic success, as measured by the standardized test scores of the Wisconsin Knowledge and Concepts Examination (WKCE). To address this question, Pearson bivariate correlational coefficients were calculated between the reading and writing raw and standard scores of the LAS and the Reading, Language Arts, Science, and Social Studies standard scores of the WKCE. Results are displayed in Table 5. As indicated in Table 5, correlation coefficients between the LAS standard scores and the WKCE standard scores ranged widely. These coefficients indicate significant positive correlations between LAS Form A Reading scores and the WKCE Science scale scores. Significant positive correlations are also noted between both LAS Form B Reading and Writing scores with WKCE Reading scale scores. Interestingly, only one LAS reading measure (i.e. LAS Form B) was found to be significantly correlated with the WKCE Reading subscale scores. Further, no LAS writing measure was found to be significantly correlated with the Language Arts subscale scores of the WKCE.

*Research Question Three: LAS Growth Over Time*

Finally, the third research question addressed whether ELL students from a north central Wisconsin school district showed significant increases in their language proficiency from year to year, as measured by the Language Assessment Scales. To address this question, dependent *t*-test analyses were computed between the 2002 and 2003 LAS raw and standard scores. Results are indicated in Table 6. Results indicate that, for the total sample, the reading LAS scores showed significant positive growth over one year. The LAS writing scores showed a significant negative change in raw scores from one year to the other for the total sample. Measures of writing in eighth grade revealed a significant negative change, while the tenth grade writing scores remained nearly even. As indicated earlier, however, the poor alternate form coefficients reveal that the writing portion of the LAS has insufficient reliability to be used to measure writing growth over time.

## Chapter V

### Summary and Discussion

The primary intent of this study was to determine the technical adequacy of the LAS as a measure of language proficiency for English language learners. Findings across previous studies suggested a positive correlation between language proficiency levels and academic achievement measures. This current study directly examined the developmental validity of a language proficiency measurement (i.e., the LAS) and correlations with measures of academic achievement in a selected group of eighth and tenth grade students.

Results of the study reveal that the alternate reliability of the LAS is acceptable for the reading measures only. Acceptable reliability coefficients were not obtained for the writing measures across the two forms of the test. As such, the LAS writing measure appears unacceptable for measuring writing growth over time. Specific findings and implications are addressed in the following sections according to their respective research question.

#### *Discussion of findings*

##### *Research Question One: Intercorrelations of LAS and GPA*

The first research question addressed the relations between LAS proficiency scores and grade point average. Across the total sample, grade point average was positively correlated only with the LAS Writing raw scores on Form A. GPA was negatively correlated with the LAS Reading raw scores on Form B. Such mixed results may be due to the effects of modified ELL curriculums and the subjective nature of grading classroom work and scoring the writing subtests of the LAS.

*Research Question Two: Intercorrelations of LAS and WKCE*

The second research question addressed the relations between LAS proficiency scores and performance on the WKCE. Only the Form B reading scores were significantly correlated with the WKCE Reading test, and the LAS writing scores were not found to be significantly correlated with any of the WKCE Language Arts test scores. These results suggest that the LAS and the WKCE reading and language arts assessments measure different constructs.

Surprisingly, findings do indicate significant relations between the Form A LAS Reading standard scores and WKCE Science scale scores. The significant relations between the Form A LAS Reading scores and the WKCE Science scale scores may be due to each respective assessment's reliance on conceptual or vocabulary development in the English language.

The lack of significant correlations between the LAS measures of writing and the WKCE Language Arts performance are difficult to explain. The lack of significant correlation coefficients may be due to differing aspects of measurement, the subjective nature of scoring the writing prompts, and the subjects' motivation and interest in the writing prompt topics on any given assessment date. Regardless, results suggest that the LAS writing test and the WKCE Language Arts assessment measure different aspects of general writing proficiency.

Findings also suggest that performance LAS Form B reading test may be a stronger predictor, compared to the LAS Form A, of the type of academic achievement measured by the WKCE. As seen in Table 5, the LAS Form B reading test was found to be significantly correlated with both the Reading and Language Arts tests of the WKCE.

*Research Question Three: LAS Growth Over Time*

Question three addressed the amount of growth measured by the LAS in each age group. As shown, the total group scores did show significant positive growth in reading across the two forms. Given this finding, the LAS reading measure may provide an adequate measure of overall reading progress. Results were mixed on scores of writing, as the eighth grade students showed a significant negative change, while the tenth grade students showed nearly no change. This lack of measurable growth in writing is likely due to the lack of equivalency between Form A and Form B of the LAS, as can be seen by the poor alternate form reliability coefficients in Table 2 and Table 3.

*Limitations*

Several limitations restrict the generalizability of this study and require discussion. First, since this research was conducted in north central Wisconsin using Wisconsin standardized achievement test results, the results may not be generalizable to other states, settings, or school districts. All of the students were categorized Asian American, and most of the students were of lower socioeconomic status. Therefore, the results may not be applicable to urban or more socio-economically, culturally, and linguistically diverse populations.

Another limitation of the study was the small sample size. The small sample size and limiting the study to the districts' eighth and tenth grade students impedes the generalizability of the study. Further research is needed to provide sufficient evidence of the relations between language proficiency and academic achievement, growth in language proficiency, and the implications for younger grade levels where WKCE scoring information is available. Further, the current study examined only growth over a one year time period. Longitudinal research

comparing the results of English language proficiency testing and academic growth over longer periods of time would prove useful for the field. Such research would assist school districts in determining the value of their assessment methods and their instructional programs.

### *Implications and Recommendations for Practice*

This study prompts a number of questions concerning the use of the LAS by school districts to determine English language proficiency levels. These results do not support the technical adequacy of the LAS to measure growth in writing, predict GPA, or predict performance on statewide assessments. Other studies could explore the generalizability of the current findings with larger samples of children in other geographic areas and from other language backgrounds. Methods involving alternative assessment methods may provide a solution, although further research is needed to establish the usefulness and technical adequacy of these methods before educators can have confidence in their ability to measure language proficiency and detect growth over time.

### *Summary*

The primary purpose of this study was to examine the relations between English language proficiency, as measured by the LAS, and academic achievement, as measured by student grade point average (GPA) and scores on the Wisconsin Knowledge and Concepts Examination (WKCE). This study also attempted to examine whether the LAS is capable of measuring English proficiency growth over the course of one year for students at the secondary level in a north central Wisconsin school district.

The findings revealed adequate alternate-form reliability and the developmental validity of the LAS Reading measures only. Significant growth, as measured by the alternate reading

forms of the LAS, was found from year to year. In contrast, poor alternate-form reliability was found between LAS Writing measures on Form A and Form B of the writing measures.

Implications of LAS scores and the relations between these scores and the student's GPA and performance on the WKCE are mixed and confusing. These results may be due to the small sample size, the poor criterion-related validity of the LAS, subjective scoring, and fluctuating student interest at the time of testing.

The English language learner population in America's schools continues to rise and continued pressure is placed on schools for rising the academic performance of students with ELL status. An integral issue is how to best measure and support the English language development of an influx of students who do not natively speak English. It is crucial, as the nation's schools continue to accommodate and serve linguistically diverse students, to determine the most valid means to evaluate language proficiency in a way that those measures provide meaningful data to assist educators in making the best programmatic and instructional decisions for English language learners.



Table 1

*Sample Characteristics and Participant Population*

Demographic	<i>n</i>	Percentages
Gender		
Male	22	75.9
Female	7	24.1
Grade		
8 <sup>th</sup>	22	75.9
10 <sup>th</sup>	7	24.1
Middle School Attended		
School #1	8	27.6
School #2	11	37.9
School #3	3	10.3
Not Reported	7	24.1
High School		
School #1	5	17.2
School #2	24	82.8
Ethnicity		
Asian American	29	100
Educational Status		
Learning Disabled	2	6.9
General Education	27	93.1
Economic Status		
Free/Reduced Lunch	26	89.7
No Free/Reduced Lunch	2	6.9
Not Reported	1	3.4
English Language Status		
English Language	0	0
English-as-a-Second-Language	29	100

Table 2

*Correlations between LAS Standard Scores of Form A and Form B*

	LAS Reading Form B Standard Score	LAS Writing Form B Standard Score
Total Students ( $n = 27$ )		
LAS Reading Form A Standard Score	.72***	.34
LAS Writing Form A Standard Score	-.03	.14
Eighth Grade Students ( $n = 20$ )		
LAS Reading Form A Standard Score	.74***	.40
LAS Writing Form A Standard Score	.23	.50*
Tenth Grade Students ( $n = 7$ )		
LAS Reading Form A Standard Score	.55	-.03
LAS Writing Form A Standard Score	-.40	-.46

Note. \*  $p < .05$ . \*\*\* $p < .001$ .

Table 3

*Correlations between LAS Raw Scores of Form A and Form B*

	LAS Reading Form B Raw Score	LAS Writing Form B Raw Score
Total Students ( $n = 27$ )		
LAS Reading Form A Raw Score	.72***	.34
LAS Writing Form A Raw Score	-.01	.19
Eighth Grade Students ( $n = 20$ )		
LAS Reading Form A Raw Score	.74***	.40
LAS Writing Form A Raw Score	.22	.49
Tenth Grade Students ( $n = 7$ )		
LAS Reading Form A Raw Score	.53	-.02
LAS Writing Form A Raw Score	-.48	-.49

*Note.* \*\*\* $p < .001$ .

Table 4

*Correlations Between Subscales of LAS Standard Scores and GPA*

	8 <sup>th</sup> Grade GPA ( <i>n</i> = 22)	10 <sup>th</sup> Grade GPA ( <i>n</i> = 7)	Total Group GPA ( <i>n</i> = 29)
Reading Form A	.17	-.35	-.10
Reading Form B	-.10	-.82*	-.389*
Writing Form A	.62**	.25	.49**
Writing Form B	.46*	-.25	.15

*Note.* \*  $p < .05$ . \*\*  $p < .01$

Table 5

*Correlations Between the LAS Scores and the WKCE Standard Scores*

Subscale	Reading	Language Arts	Math	Science	Social Studies
LAS A Reading RS	.29	.34	.15	.41*	.35
LAS A Reading SS	.28	.33	.15	.41*	.07
LAS A Writing RS	-.18	-.06	-.17	-.23	-.27
LAS A Writing SS	-.19	-.05	-.15	-.24	-.27
LAS B Reading RS	.46*	.40	.25	.36	.33
LAS B Reading SS	.45*	.39	.24	.34	.33
LAS B Writing RS	.43*	.29	-.22	.20	.00
LAS B Writing SS	.43*	.28	-.22	.20	.00

Note: RS = Raw Score, SS = Standard Score

\* $p < .05$ .  $n = 27$

Table 6

*Growth Over Time: Dependent t-test Analyses*

Source	<i>df</i>	<i>t</i>	<i>p</i>
8 <sup>th</sup> Grade Reading Raw Score	19	6.96***	.00
8 <sup>th</sup> Grade Reading Standard Score	19	7.05***	.00
8 <sup>th</sup> Grade Writing Raw Score	19	-3.22**	.01
8 <sup>th</sup> Grade Writing Standard Score	19	-3.40**	.00
10 <sup>th</sup> Grade Reading Raw Score	6	4.10**	.01
10 <sup>th</sup> Grade Reading Standard Score	6	4.26**	.01
10 <sup>th</sup> Grade Writing Raw Score	6	0.45	.97
10 <sup>th</sup> Grade Writing Standard Score	6	0.17	.87
Total Group Reading Raw Score	26	8.13***	.00
Total Group Reading Standard Score	26	8.29***	.00
Total Group Writing Raw Score	26	-2.14*	.04
Total Group Writing Standard Score	26	-1.93	.06

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